Signature

CUTIN

Date

U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

UTILITY PATENT APPLICATION

Attorney Docket No.	PGS-03-07US	
First Inventor	Junru Jiao	
Title	Horizon-Based Residual	
Express Mail Label No.	ER621809364US	2_

TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b)) Mail Stop Patent Application Commissioner for Patents APPLICATION ELEMENTS ADDRESS TO: P.O. Box 1450 Alexandria VA 22313-1450 See MPEP chapter 600 concerning utility patent application contents. 1. Fee Transmittal Form (e.g., PTO/SB/17) CD-ROM or CD-R in duplicate, large table or (Submit an original and a duplicate for fee processing) Computer Program (Appendix) 2. Applicant claims small entity status. Nucleotide and/or Amino Acid Sequence Submission See 37 CFR 1.27. (if applicable, all necessary) [Total Pages_ Specification Computer Readable Form (CRF) (preferred arrangement set forth below) Descriptive title of the invention b. Specification Sequence Listing on: - Cross Reference to Related Applications

3. 🗹 - Statement Regarding Fed sponsored R & D CD-ROM or CD-R (2 copies); or - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention c. Statements verifying identity of above copies - Brief Description of the Drawings (if filed) - Detailed Description **ACCOMPANYING APPLICATION PARTS** - Claim(s) - Abstract of the Disclosure Assignment Papers (cover sheet & document(s)) 4. Drawing(s) (35 U.S.C. 113) [Total Sheets _ 10. 37 CFR 3.73(b) Statement Power of (when there is an assignee) Attorney 5. Oath or Declaration [Total Sheets English Translation Document (if applicable) a. Newly executed (original or copy) Information Disclosure Copies of IDS Statement (IDS)/PTO-1449 Citations Copy from a prior application (37 CFR 1.63(d)) **Preliminary Amendment** (for continuation/divisional with Box 18 completed) Return Receipt Postcard (MPEP 503) (Should be specifically itemized) **DELETION OF INVENTOR(S)** Certified Copy of Priority Document(s) Signed statement attached deleting inventor(s) (if foreign priority is claimed) name in the prior application, see 37 CFR 16. 🔲 Nonpublication Request under 35 U.S.C. 122 1.63(d)(2) and 1.33(b). (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. Application Data Sheet. See 37 CFR 1.76 17. 🗹 Other: Extra.copy.of Drawings Extra copy of Fee Transmittal 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: Continuation-in-part (CIP) Continuation Divisional of prior application No.: Examiner Art Unit: Prior application information: For CONTINUATION OR DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. 19. CORRESPONDENCE ADDRESS **Customer Number:** Correspondence address below Name E. Eugene Thigpen Petroleum Geo-Services, Inc. Address P.O. Box 42805 City Zip Code State 77242-2805 Telephone 281-679-2288 Country Fax United States of America 281-589-1482 Name (Print/Type) Registration No. (Attorney/Agent) E. Eugene Thigpen 27,400

This collection of information is required by 37 CFR 1.53(b). Melinformation is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Approved for use through 07/31/2006. OMB 0651-003)
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
o a collection of information unless it displays a valid OMB control automatical control and control automatical control automatical

			Complete if Known							
FEE TRANSMITTAL			Li						-	
			Application Number Filing Date			April 22, 2004				
for FY 2004							·····			
Effective 10/01/26	003. Patent fees are su	bject to annual revision		First Named Inventor Junru		tor Juliu J	lau -			
Applicant claims	small entity status.	See 37 CFR 1.27		Examiner Name						
TOTAL AMOUNT	DE DAVMENT	(\$) 770.00		Art Unit						
				Attorney Docket No. PGS-03-07US						
METHOD OF	PAYMENT (check	all that apply)		FEE CALCULATION (continued)						
Check Credit card Money Other None				3. ADDITIONAL FEES Large Entity , Small Entity						
Deposit Account:		Fee			Fee	Foo	Description	•		
Deposit Account 50-22	23	İ	Code	(\$)	Code	(\$)		•		Fee Paid
Number		1051 1052		2051 2052		Surcharge - late	-			
Account Name Petroleum Geo-Services						Surcharge - late cover sheet	·	iing lee or		
The Director is authorize			1053	130 2,520	1053 1812 2		Non-English spe For filing a requ		te reexamination	
Charge fee(s) indicat		dit any overpayments	1804	•			Requesting pub			
Charge any additional		• • • •					Examiner action	1		
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.		1805	1,840*	1805	1,840*	Requesting put Examiner action		R after		
FEE CALCULATION		1251		2251	55	Extension for re				
1. BASIC FILING FEE		1252	-	2252		Extension for n				
Large Entity Small Ent Fee Fee Fee Fee		Fee Paid	1253		2253		Extension for re			
Code (\$) Code (\$)	<u>roo bosonphon</u>		l	1,480	2254		Extension for re			
1001 770 2001 38	, ,	770.00		2,010	2255		Extension for re		n month	
1002 340 2002 17	0 0	e	1401 1402		2401 2402		Notice of Appe			
1003 530 2003 26 1004 770 2004 38	J		1402		2402		Filing a brief in Request for ora		арреаі	
1004 770 2004 38	3			1,510	1451		Petition to instit	=	se proceeding	
1000 100 2000 0			1452		2452		Petition to reviv			
	SUBTOTAL (1)		1453	1,330	2453		Petition to reviv			
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE		1501	1,330	2501		Utility issue fee				
Total Oleima (40)	Extra Claims	below Fee Paid	1502	480	2502	240	Design issue fe	ее	:	
Total Claims 12 Independent 2	-20** = 0 X	= 0	1503	640	2503	320	Plant issue fee	•		
Claims	-3** = [0 X		1460	130	1460	130	Petitions to the	Commission	er	
, ,	·414		1807	50	1807	50	Processing fee	under 37 CF	R 1.17(q)	<u> </u>
Large Entity Small E Fee Fee Fee	Fee <u>Fee Descri</u>	otion	1806	180	1806		Submission of			
Code (\$) Code			8021	40	8021	40	Recording each property (times	n patent assig number of pr	nment per operties)	
1202 18 2202 1201 86 2201		laims in excess of 3	1809	770	2809	385	Filing a submis		I rejection	
1201 86 2201	•	ident claim, if not paid	1810	770	2810	30F	(37 CFR 1.129 For each additi		to be	
1204 86 2204	43 ** Reissue ind	ependent claims					examined (37 (CFR 1.129(b))	
	over original	•	180		2801		Request for C		, ,	
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent		1802	900	1802	900	Request for e of a design ap		nination		
SUBTOTAL (2) (\$)-0-			Othe	Other fee (specify)						
**or number previously paid, if greater; For Reissues, see above				luced by	Basic F	iling F	ee Paid (SUBTOTAL	(3) (\$)	
SUBMITTED BY (Complete (if applicable))										
Name (Print/Type) E. Eugene Thigpen				Registration No. (Attorney/Agent) 27,400 Telephone 281-679-2288						
Signature E- Engage I Sea him				-			Date April 22, 2004			

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card Information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Commisso is Vancoum

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL	Complete if Known						
I EE HAMOMII I AL	Application Number						
for FY 2004	Filing Date April 22, 2004	April 22, 2004					
Effective 10/01/2003. Patent fees are subject to annual revision.	First Named Inventor Junru Jiao						
	Examiner Name						
Applicant claims small entity status. See 37 CFR 1.27	— Art Unit						
TOTAL AMOUNT OF PAYMENT (\$) 40.00	Attorney Docket No. PGS-03-07US						
METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)						
	3. ADDITIONAL FEES						
✓ Deposit Account:	arge Entity Small Entity						
Deposit FO 2222	Fee Fee Fee Fee Description Code (\$) Code (\$)	e Paid_					
Account Number	1051 130 2051 65 Surcharge - late filing fee or oath						
Deposit Account Petroleum Geo-Services	1052 50 2052 25 Surcharge - late provisional filing fee or cover sheet						
Name The Director is authorized to: (check all that apply)	1053 130 1053 130 Non-English specification						
Charge fee(s) indicated below Credit any overpayments	1812 2,520 1812 2,520 For filing a request for ex parte reexamination						
Charge any additional fee(s) or any underpayment of fee(s)	1804 920* 1804 920* Requesting publication of SIR prior to Examiner action						
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805 1,840* 1805 1,840* Requesting publication of SIR after Examiner action						
FEE CALCULATION	1251 110 2251 55 Extension for reply within first month						
1. BASIC FILING FEE	1252 420 2252 210 Extension for reply within second month						
Large Entity Small Entity	1253 950 2253 475 Extension for reply within third month						
Fee Fee Fee Fee Fee Description Fee Paid Code (\$) Code (\$)	1254 1,480 2254 740 Extension for reply within fourth month						
1001 770 2001 385 Utility filing fee	1255 2,010 2255 1,005 Extension for reply within fifth month						
1002 340 2002 170 Design filing fee	1401 330 2401 165 Notice of Appeal						
1003 530 2003 265 Plant filing fee	1402 330 2402 165 Filing a brief in support of an appeal						
1004 770 2004 385 Reissue filing fee	1403 290 2403 145 Request for oral hearing						
1005 160 2005 80 Provisional filing fee	1451 1,510 1451 1,510 Petition to institute a public use proceeding						
SUBTOTAL (1) (\$)	1452 110 2452 55 Petition to revive - unavoidable						
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE	1453 1,330 2453 665 Petition to revive - unintentional						
Fee from	1501 1,330 2501 665 Utility issue fee (or reissue)						
Extra Claims below Fee Paid Total Claims -20** = X = -	1502 480 2502 240 Design issue fee						
Independent 344 - V	1503 640 2503 320 Plant issue fee						
Claims -3	1460 130 1460 130 Petitions to the Commissioner						
Large Entity Small Entity	1807 50 1807 50 Processing fee under 37 CFR 1.17(q)						
Fee Fee Fee Fee Description	1806 180 1806 180 Submission of Information Disclosure Stmt						
Code (\$)	8021 40 8021 40 Recording each patent assignment per property (times number of properties)	0.00					
1202 18 2202 9 Claims in excess of 20 1201 86 2201 43 Independent claims in excess of 3	1809 770 2809 385 Filing a submission after final rejection (37 CFR 1.129(a))						
1203 290 2203 145 Multiple dependent claim, if not paid	1810 770 2810 385 For each additional invention to be						
1204 86 2204 43 ** Reissue independent claims over original patent	examined (37 CFR 1.129(b)) 1801 770 2801 385 Request for Continued Examination (RCE)	[
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1802 900 1802 900 Request for expedited examination of a design application						
	Other fee (specify)						
SUBTOTAL (2) **or number previously paid, if greater; For Reissues, see above	*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40.00						
SUBMITTED BY	Posistation No.						
Name (Print/Type) E. Eugene Thigpen	(Attorney/Agent) 27,400 Telephone 281-679-2288						

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date

April 22, 2004

Signature